

## BOOKING APP BLUEPRINT

### 1) MODELS

- Booking: id, customer, provider, service, start, end, status, payment\_status, time\_range, price\_snapshot, duration\_snaps
- Payment (optional): id, booking, amount, currency, status, provider\_reference, created\_at
- WeeklyAvailability (ref): used during booking validation
- CalendarBlock (ref): used during booking validation

### 2) DOMAIN RULES

- Slot validation: must be within provider availability window
- No overlap with provider calendar blocks
- No overlap with existing bookings
- Future start-time only
- Idempotency: same user + key returns same booking
- Status transitions allowed: PENDING -> CONFIRMED/CANCELLED/COMPLETED/NO\_SHOW

### 3) SERIALIZER GUIDELINES

- BookingCreateSerializer:
  - Input: service\_id, provider\_id, start, idempotency\_key
  - Resolves service duration & price
  - Computes end from duration
  - Validates availability & conflicts
  - Injects customer, snapshots, time\_range
- BookingListSerializer:
  - Read-only output: provider, service, status, payment\_status, start/end
- BookingDetailSerializer:
  - Full details for user

### 4) VIEW/ENDPOINT BEHAVIOR

- POST /api/bookings/
  - Auth required
  - Creates booking with idempotency logic
- GET /api/bookings/
  - Lists user's bookings only
- GET /api/bookings/{id}/
  - User can see only their booking
- POST /api/bookings/{id}/cancel/
  - Changes status to CANCELLED if allowed
- GET /api/providers/{id}/availability/
  - Returns available slots based on date range, service duration, schedule, and conflicts

### 5) AVAILABILITY FLOW

- Input: provider\_id, service\_id, from, to
- Load provider-service duration
- Load weekly schedule for target dates
- Load calendar blocks
- Load existing bookings
- Generate slots based on step size = duration

### 6) BUSINESS LOGIC LAYER

- resolve\_provider\_service: fetches provider-service pair
- is\_slot\_available: checks schedule + blocks + bookings
- generate\_slots: returns all viable start-end ranges

### 7) ACCESS CONTROL

- User: create/cancel/list their bookings
- Provider: view bookings for their schedule (optional)
- Admin: full management (optional)

END OF BLUEPRINT